

IN THE CLAIMS

Please cancel claim 3 without prejudice or disclaimer of subject matter.

Please amend claims 1 and 10-14 as follows.

1. (Currently Amended) A sensor comprising:

a waveguide comprising a single conductor for allowing an electromagnetic wave to propagate therethrough and allowing an object to be disposed at a plurality of positions thereof;

a detecting portion for detecting the electromagnetic wave which has interacted with the object at the plurality of positions and propagated through the waveguide; and

~~an object disposing means~~ protrusions comprising a dielectric for disposing the object at the plurality of positions, the ~~object disposing means~~ protrusions being periodically disposed at intervals of an order of a wavelength of the electromagnetic wave such that the object and the electromagnetic wave propagating through the waveguide interact with each other,

wherein a property of the object is analyzed or identified based on information obtained from the electromagnetic wave detected by the detecting portion.

2 - 4. (Cancelled)

5. (Previously Presented) A sensing apparatus having a plurality of the sensor set forth in claim 1 arranged in an array.

6. (Previously Presented) A sensing apparatus comprising:
the sensor set forth in claim 1; and
a storage portion for storing information associated with the property of the object,
wherein the information obtained by the detecting portion and the information stored in
the storage portion are used to analyze or identify the property of the object.

7. (Original) A sensing apparatus comprising:
the sensor set forth in claim 1; and
means for coupling the electromagnetic wave into the waveguide for allowing the
electromagnetic wave to propagate therethrough.

8. (Withdrawn) A method of analyzing or identifying a property of an object using an
electromagnetic wave, comprising the steps of:
disposing an object at a plurality of positions of a waveguide for allowing an
electromagnetic wave to propagate therethrough; and
detecting the electromagnetic wave which interacted with the object at the plurality of
positions and propagated through the waveguide and analyzing or identifying a property of the
object based on an information obtained from the detected electromagnetic wave.

9. (Withdrawn) The method according to claim 8, wherein the step of disposing the object at the plurality of positions comprises periodically disposing the object at the plurality of positions.

10. (Currently Amended) The sensor according to claim 1, wherein the waveguide is a coplanar waveguide which comprises a dielectric having disposed on a surface thereof the single conductor and a ground conductor with a minute gap between the single conductor and the ground conductor, provided with a minute gap there between; and

wherein the ~~object disposing means has~~ protrusions are disposed on the surface of the dielectric and have a structure in which the object is disposed in the minute gap at a pitch corresponding to a half of the wavelength of the electromagnetic wave.

11. (Currently Amended) A sensor comprising:

a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing ~~an object disposed thereon to be sensed~~ a sensing object to be disposed thereon;

~~an object disposing means for disposing the object on the waveguide;~~ and

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide.

wherein the object disposing means comprises an ejection means for ejecting and disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other an ink jet system for ejecting and disposing the object on the waveguide; and protrusions comprising a dielectric and disposed at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other, wherein the object is ejectable from the ink jet system toward the protrusions.

12. (Currently Amended) A sensor comprising:

a waveguide which is a microstrip line comprising a single conductor for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing ~~an~~ a sensing object to be disposed thereon ~~to be sensed~~;

~~an~~ object disposing means for disposing the object on the waveguide; and

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide,

wherein the object disposing means comprises ~~a protrusion shape pattern or a pattern,~~ including a hydrophilic portion and a hydrophobic portion, for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other.

13. (Currently Amended) A sensing apparatus for sensing an object by using a sensor and an information obtained from a detection portion constituting the sensor, which comprises:

a sensor comprising a waveguide which is a microstrip line comprising a single conductor for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing a sensing object to be disposed thereon, ~~an object disposed thereon to be sensed~~; and a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide;

~~an ejection means for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other;~~

an ink jet system for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other; and

a storage portion for storing information associated with a property of the object, wherein information obtained by the detecting portion and the information stored in the storage portion are used to analyze or identify the property of the object.

14. (Currently Amended) A sensor comprising:

a waveguide for allowing an electromagnetic wave of 30 GHz to 30 THz to propagate therethrough and allowing ~~[[an]]~~ a sensing object to be disposed thereon ~~to be sensed~~;

~~an object disposing means for disposing the object on the waveguide; and~~

a detecting portion for detecting the electromagnetic wave which has propagated through the waveguide,

wherein the object disposing means comprises any one of an ejection means for ejecting the object, a protrusion shape pattern, and a pattern including a hydrophilic portion and a hydrophobic portion; for disposing the object at a plurality of positions on the waveguide located at intervals such that the object and the electromagnetic wave propagating through the waveguide interact with each other

an ink jet system for ejecting and disposing the object; and

holes disposed at a plurality of positions on the waveguide located at intervals such that the disposed object and the electromagnetic wave propagating through the waveguide interact with each other.

wherein the object is ejectable from the ink jet system toward the holes.